

List of Claims:

Claims 1-7 (cancelled)

8. (currently amended) A method for classifying a speech signal having a background noise portion with a background noise level, the method comprising the steps of:

extracting a parameter from the speech signal;

estimating a noise component of the parameter;

removing the noise component from the parameter to generate a noise-free parameter;

selecting a pre-determined threshold, wherein the step of selecting said pre-determined threshold is unaffected by said background noise level;

comparing the noise-free parameter with said pre-determined threshold; and

associating the speech signal with a class in response to the comparing step;

wherein the extracting steps step extracts a plurality of parameters and the steps of estimating, removing, selecting, comparing and associating are performed for each of the plurality of parameters, wherein the plurality of parameters include a spectral tilt parameter, a pitch correlation parameter and an absolute maximum parameter, and wherein said spectral tilt parameter is weighted to generate a noise-free spectral tilt parameter during the step of removing, said pitch correlation parameter is weighted to generate a noise-free pitch correlation parameter during the step of removing and said absolute maximum parameter is weighted to generate a noise-free absolute maximum parameter during the step of removing.

Claims 9-19 (cancelled)

20. (currently amended) A method for processing a speech signal having a background noise portion with a background noise level, the method comprising the steps of:

extracting a set of speech parameters from the speech signal;

forming a set of noise-free parameters based on the speech parameters;

selecting a pre-determined set of thresholds, wherein the step of selecting said pre-determined set of thresholds is unaffected by said background noise level;

comparing each of the noise-free parameters with each corresponding threshold of [[a]] said pre-determined set of thresholds; and

classifying the speech signal based on the comparing step;

wherein the speech parameters include a spectral tilt parameter, a pitch correlation parameter and an absolute maximum Parameter parameter, and wherein said spectral tilt parameter is weighted to generate a noise-free spectral tilt parameter during the step of forming, said pitch correlation parameter is weighted to generate a noise-free pitch correlation parameter during the step of forming and said absolute maximum parameter is weighted to generate a noise-free absolute maximum parameter during the step of forming.

Claim 21 (cancelled)

22. (previously presented) The method of claim 20, wherein the forming step comprises:

- estimating a noise component of the speech signal; and
- removing the noise component from each of the speech parameters.

Claims 23-27 (cancelled)

28. (previously presented) The method of claim 8, wherein weighting the parameter includes subtracting a background noise contribution.

Claims 29-31 (cancelled)

32. (currently amended) A speech coding device for classifying a speech signal having a background noise portion with a background noise level, the speech coding device comprising:

- a parameter extractor module configured to extract a parameter from the speech signal to be used for classifying the speech signal;
- a noise estimator module configured to estimate a noise component of the parameter;
- a noise removal module configured to remove the noise component from the parameter to generate a noise-free parameter;
- a comparator module configured to compare the noise-free parameter with a pre-determined threshold, wherein said pre-determined threshold is unaffected by said background noise level; and

a classification module configured to associate the speech signal with a class in response to the comparator module;

wherein the parameter extractor module extracts a plurality of parameters and the noise estimator module, the noise removal module, the comparator module and the classification module ~~associating~~ operate on each of the plurality of parameters, wherein the plurality of parameters include a spectral tilt parameter, a pitch correlation parameter and an absolute maximum parameter, and wherein the noise removal module weights said spectral tilt parameter to generate a noise-free spectral tilt parameter, the noise removal module weights said pitch correlation parameter to generate a noise-free pitch correlation parameter and the noise removal module weights said absolute maximum parameter to generate a noise-free absolute maximum parameter.

Claims 33-37 (cancelled)

38. (previously presented) The speech coding device of claim 32, wherein weighting the parameter includes subtracting a background noise contribution.

Claim 39 (cancelled)

40. (currently amended) A computer program product for classifying a speech signal having a background noise portion with a background noise level, the computer program product comprising:

- code for extracting a parameter from the speech signal;
- code for estimating a noise component of the parameter;
- code for removing the noise component from the parameter to generate a noise-free parameter;
- code for selecting a pre-determined threshold, wherein selection of said pre-determined threshold is unaffected by said background noise level;
- code for comparing the noise-free parameter with [[a]] said pre-determined threshold; and
- code for associating the speech signal with a class in response to the code for comparing;

wherein the code for extracting ~~steps~~ extracts a plurality of parameters and the code ~~of~~ for estimating, removing, selecting, comparing and associating are performed for each of the plurality of parameters, and wherein the plurality of parameters include a spectral tilt parameter, a pitch correlation parameter and an absolute maximum parameter, and wherein the code for removing weights said spectral tilt parameter to generate a noise-free spectral tilt parameter, the code for removing weights said pitch correlation parameter to generate a noise-free pitch correlation parameter and the code for removing weights said absolute maximum parameter to generate a noise-free absolute maximum parameter.

Claims 41-45 (cancelled)

46. (previously presented) The computer program product of claim of 40, wherein the code for applying weighting includes code for subtracting a background noise contribution.

Claims 47-51 (cancelled)